

REMARKS

Claims 1-17 are pending in this application. By this Amendment, the specification and claims 1, 5-9, 11, 12, 14 and 17 are amended. Additionally, Claims 18-20 are cancelled without prejudice or disclaimer. The specification has been amended for clarification and contains no new matter. Reconsideration in view of the above amendments and following remarks is respectfully requested.

Applicant gratefully acknowledges the Office Action's indication that claim 20 is allowable. However, for at least the reasons set forth below, Applicant respectfully submits that all pending claims are in condition for allowance.

I. **35 U.S.C. §102(e)**

The Office Action rejects claims 1, 5, 6, and 8-19 under 35 U.S.C. §102(e) over House (U.S. Patent No. 6,298,177). Since House fails to disclose or suggest all the features of the claims, the rejection is respectfully traversed.

Applicant respectfully submits that House appears to disclose, as illustrated in Figure 1, a silicon rib waveguide including a layer of silicon 11 with an upstanding rib 12 defining an optical transmission path for a waveguide 17. However, House fails to disclose or suggest, as recited in claim 1, at least the feature of means arranged to apply an electrical signal across the waveguide via two doped regions to alter attenuation properties and/or a refractive index of the waveguide by altering the density of charge carriers within the waveguide, the two doped regions

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each comprising a plurality of doped areas spaced apart from each other in a direction parallel to the length of the waveguide the size and spacing of the doped areas being selected so that the efficiency of the device, in terms of the increase in attenuation or change in refractive index per unit current applied thereto, is increased.

Additionally, as illustrated in Figure 5 of House, two PN junctions 71 and 72 are illustrated, wherein the two PN junctions extend through a silicon layer symmetrically above a central axis through a rib portion. See House, col. 5, lines 55-65. However, as mentioned above, House still fails to disclose or suggest at least a feature mentioned above with respect to claim 1.

With respect to claim 17, claim 17 incorporates features of allowable claim 20 (including features of dependent claim 19) in order to expedite prosecution. As such, Applicant respectfully submits that claim 17 is allowable. Claims 18 and 19 have been cancelled without prejudice or disclaimer, therefore the rejection of claims 18 and 19 are moot.

For at least the reasons set forth above, Applicant respectfully submits that claims 1 and 17 are allowable. Claims 5, 6 and 8-16 depend from claim 1, and are allowable for at least the same reasons, as well as their added features and the combination thereof. Withdrawal of the rejection is respectfully requested.

II. 35 U.S.C. §103(a)**A. Claims 2-4**

The Office Action rejects claims 2-4 under 35 U.S.C. § 103(a) over House. Since House was commonly owned or assigned at the time of the invention, the rejection is respectfully traversed.

As the present application was filed after November 29, 1999, 35 U.S.C. §103(c) applies. According to 35 U.S.C. §103(c), "subject matter developed by another person, which qualifies as prior art only under one or more subsections (e), (f), and (g) of §102 of this title, shall not preclude patentability under this section where the subject matter in the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person." As both the House reference and the present application were commonly assigned at the time the invention was made, Applicant respectfully submits that the House reference should not preclude patentability under 35 U.S.C. §103(a).

For at least the reasons set forth above, as well as the reasons set forth with respect to the 35 U.S.C. §102(e) rejection, Applicant respectfully submits that claims 2-4 are allowable. Withdrawal of the rejection is respectfully requested.

B. Claim 7

The Office Action rejects claim 7 under 35 U.S.C. §103(a) over House in view of May et al. (U.S. Patent No. 4,997,246). Since House should not preclude patentability under 35

U.S.C. §103(a), and since May alone does not disclose or suggest all the features of the claim, the rejection is respectfully traversed.

For at least the reasons discussed above, Applicant respectfully submits that claim 7 is allowable, as the House reference should not be applied in this 35 U.S.C. §103(a) rejection. Therefore, claim 7 is allowable. Withdrawal of the rejection is respectfully requested.

III. Drawings

The Office Action objects to Figures 1-6 and 11-12 for not being "textually labeled." However, in a telephone conference with Examiner Kianni on February 28, 2003, the Examiner withdrew this objection. As such, no objection to the drawings are pending. Applicant respectfully requests that if the Examiner has further objections to the drawings, specific instructions as to corrections be provided by the Examiner.

Therefore, as the objection to the drawings were withdrawn on February 28, 2003, Applicant submits that no objections to the drawings are pending. Formal withdrawal of the objection is requested.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact

the undersigned attorney, Laura L. Lee, at the telephone number listed below. Favorable consideration and prompt allowance are earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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Date: March 28, 2003

DYK/LLJ:mjc